

pate the claims under s. 102(b), the cited publication must pre-date the applicant's filing date by more than one year, and must disclose every element of the claim. The absence from the claim reference of any claimed element negates anticipation. *Kloster Speedsteel AB v. Crucible Inc.*, 793 F. 2d 1565, 1571 (Fed Cir. 1986). First, the date of the www.potgrond.com.uk web site is January 9, 2002 whereas the present application was filed December 18, 2000. Consequently the www.potgrond.com.uk web site is not prior art for purposes of s. 102(b). In any event, nowhere in the Van der Knap web site is there any reference to use of Fibre-Neth for tree seedling plugs. The Trademarkscan document references publication of the FIBRE NETH trademark registration on October 1, 1998, but the only relevant information in the registration is the description of the goods: "BLOCKS PROVIDED WITH GATE AND CONTAINING OF COMBINATION OF COCONUT GRIT AND SYNTHETIC FIBRES, FOR USE IN RAISED EXTRACT CULTIVATION". Again, nowhere in the Benelux trademark registration is there any reference to use of Fibre-Neth for tree seedling plugs. The Examiner states that the reference "inherently includes a tree seedling with roots". An examiner who relies on the theory of inherency must provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied prior art. *Ex parte Levy*, 17 USPQ 2d 1461, 1464 (Bd. Pat App. & Int. 1990). With respect, the Examiner has not provided any basis in fact or technical reasoning as to why the use of Fibre Neth for tree seedling plugs would be inherent in the Benelux trademark registration. Withdrawal of the objection under s. 102(b) is therefore respectfully requested.

The Examiner further rejects claim 2 under 35 U.S.C. s. 103(a) as unpatentable over Van der Knaap B.V. Fibre Neth in view of U.S. Patent no. 5,942,029 to Spittle; rejects claims 3, 5 and 16 under 35 U.S.C. s. 103(a) as unpatentable over Van der Knaap B.V. Fibre Neth in view of U.S. Patent no. 5,331,908 to Loeb; rejects claims 4 and 7 under 35 U.S.C. s. 103(a) as unpatentable over Van der Knaap B.V. Fibre Neth as applied to claims 3 and 5 further in view of U.S. Patent no. 5,942,029 to Spittle; rejects claims 6 and 17 under 35 U.S.C. s. 103(a) as unpatentable over U.S. Patent no. Des. 325,714 to Karhiniemi in view of Van der Knaap B.V. Fibre Neth; rejects claims 8, 9, 11, 12, 13, 14, 18 and 19 under 35 U.S.C. s. 103(a) as unpatentable over U.S. Patent no. Des. 325,714 to Karhiniemi as applied to claim 6 further in view of in view of U.S. Patent no. 5,331,908 to Loeb; and rejects claim 10 under 35 U.S.C. s. 103(a) as unpatentable over Van der Knaap B.V. Fibre Neth as applied to claim 8 further in view of U.S. Patent no. 5,942,029 to Spittle. Reconsideration is respectfully requested, having regard to the following comments.

The present invention is the discovery that surprising benefits accrue in the production of tree seedling plugs, which are used by tree planters for reforestation, when the plugs are formed using a thermal-sensitive fibre which had been previously used for horticultural purposes, such as flowers, but not tree seedlings. The surprising benefits are reduced growing time before the tree seedling plug can be used, which allows the forest company to plant during the optimum conditions for ensuring survival of the trees. Because smaller seedlings can be used, greater genetic diversity of the tree seedlings is permitted. Also seed costs and energy costs are reduced. The requirements for manufacturing tree seedling plugs for reforestation purposes are vastly different from the requirements for flowers and similar horticultural products, so no one skilled in the art of tree seedling plug manufacture would be readily led to assume that something used in the flower pot area would have benefits for tree seedling production. The tree seedling plugs are carried by tree planters and planted by hand in rugged, inhospitable terrain. First, as noted above, the date of the www.potgrond.com.uk web site is January 9, 2002 whereas the present application was filed December 18, 2000. Consequently the www.potgrond.com.uk web site is not prior art for purposes of s. 103(a). The Benelux registration for FIBRE NETH merely references cultivation generally. Spittle discloses a mulch for grass seed. Loeb discloses a method of growing perennial flowers. There is nothing in the prior art cited by the examiner which indicates that the use of a thermal-sensitive fibre would have surprising benefits in the area of tree seedling plug production. Consequently favorable reconsideration of the claims is respectfully requested.

As required by 37 C.F.R. § 1.121, applicants have provided a separate, marked-up version of the amended claim, showing the changes relative to the previous version of those claims (attached).

Respectfully submitted,

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VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE ABSTRACT

The Abstract has been amended as follows:

A method of making tree seedling plugs which permits the plug to be transplanted earlier is provided. The tree seeds are planted in a structured soil growing medium, and a miniplug is formed which [may] is then transferred to a standard size growing cell for further development to form the plug.

IN THE SPECIFICATION

The paragraph commencing on page 1, line 20 has been amended as follows:

Previously, tree seedlings were grown for up to three years in a nursery and then transplanted with bare roots. The disadvantages of such "bare root" planting of tree seedlings have been outlined in the present inventor's prior United States Patent no. 3,722,139. Bare root replanting of tree seedlings has a high failure rate, since the soil into which the seedling is planted may have been overly harsh, cold or dry and the seedling roots may not have had time to develop adequately in a short growing season. Consequently a method of growing seedlings in a soil plug called "styrobloc plugs" has been developed. The soil plug can be planted using a dibble rather than a mattock. According to the current method, styrofoam trays or blocks having an array of cylindrical cavities are used. The cavities are filled with a loose growing soil mixture consisting of peat moss, sawdust and additives covered with loose sand. Generally two tree seeds are placed in each cavity. The trays are then placed in a greenhouse for the seed to germinate in warmth and light. After about 7 months the roots of the seedling have sufficiently developed to hold the growing medium together, forming a plug. At that point the seedlings are ejected from the styrofoam blocks and wrapped and packed for shipping or storage. In this way the roots of the seedling when planted are assured of a moist growing medium.

IN THE CLAIMS

Claims 11 and 15-19 are cancelled.

Claims 2, 3, 4, 7, 8, 9, 12, 13, 14 are amended as follows:

- 2.(Once Amended) The tree seedling plug of claim 1 wherein said growing medium comprises a loose growing soil mixture consisting of approximately 95% by weight coconut coir fibre,[,] and 5% by weight of thermal-sensitive fibre.
- 3.(Once Amended) A tree seedling plug comprising a tree seedling having roots, and a first generally cylindrical plug of a first growing medium surrounding the said roots, wherein said first growing medium comprises a network of thermal-sensitive fibre, and further comprising a second cylindrical

plug of a second growing medium surrounding the outer and lower surfaces of said first cylindrical plug.

- 4.(Once Amended) The tree seedling plug of claim 3 wherein said first growing medium comprises a loose growing soil mixture consisting of approximately 95% by weight coconut coir fibre,[.] and 5% by weight of thermal-sensitive fibre.
- 7.(Once Amended) The method of claim [5] 6 wherein said growing medium comprises a loose growing soil mixture consisting of approximately 95% by weight coconut coir fibre,[.] and 5% by weight of thermal-sensitive fibre.
- 8.(Once Amended) A method of forming a seedling plug comprising:
- i) forming a first generally cylindrical plug of a first growing medium wherein said first growing medium comprises a network of [Fibre-neth] thermal-sensitive fibre, by
 - a) filling a hollow cell with a growing medium wherein said growing medium comprises a network of thermal-sensitive fibre;
 - b) planting a tree seed in said hollow cell;
 - c) germinating said seed into a seedling and nurturing said seedling to provide root development;
 - d) after sufficient root development of said seedling has occurred, ejecting said seedling and growing medium to form said first cylindrical plug;
 - ii) transplanting said first generally cylindrical plug into a hollow cell with a growing medium wherein said growing medium comprises a network of thermal-sensitive fibre;
 - iii) after sufficient root development of said seedling has occurred, ejecting said seedling and growing medium to form said seedling plug.
- 9.(Once Amended) A method of forming a seedling plug comprising:
- i) forming a first generally cylindrical plug of a first growing medium wherein said first growing medium comprises a network of thermal-sensitive fibre, by
 - a) filling a hollow cell with a growing medium wherein said growing medium comprises a network of [Fibre-neth] thermal-sensitive fibre;

- b) planting a tree seed in said hollow cell;
- c) germinating said seed into a seedling and nurturing said seedling to provide root development;
- d) after sufficient root development of said seedling has occurred, ejecting said seedling and growing medium to form said first cylindrical plug;
- ii) transplanting said first generally cylindrical plug into a hollow cell with a growing medium wherein said growing medium comprises a second growing medium;
- iii) after sufficient root development of said seedling has occurred, ejecting said seedling and growing medium to form said seedling plug.

12.(Once Amended) The method of claim [8] 2 wherein said second growing medium a loose growing soil mixture comprising peat moss and sawdust.

13.(Once Amended) The method of claim [5] 6 wherein said growing medium comprising a network of [Fibre-neth] thermal-sensitive fibre is formed by filling a tray of hollow cells with said growing medium, dipping said tray in a bath of hot water at a temperature of approximately 89 degrees Celsius, and then dipping said tray in a bath of water at tap water temperature, 5 to 10 degrees Celsius.

14.(Once Amended) The method of claim [5] 6 wherein said growing medium comprising a network of thermal-sensitive fibre is formed by filling a tray of hollow cells with said growing medium, and alternatively cascading water onto the tray to heat and cool the tray.

CERTIFICATE OF FACSIMILE TRANSMISSION

I hereby certify that this paper is being facsimile transmitted to the Patent and Trademark Office on the date shown below.

Bruce M. Green Reg. No. 30,524
Name of Person Signing Certification

Bruce M. Green July 14, 2002

[Response to Office Action mailed 01/15/2002]